

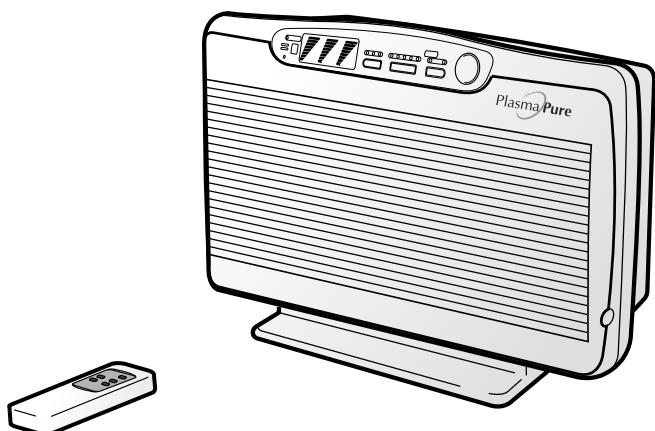
# AIR PURIFIER

<Desktop type>

MODEL

**MA-EF503HS-U**  
**MA-EF303HS-U**

## INSTRUCTION MANUAL



### Features

- **Plasma deodorization**

For odors that cannot be removed even with activated charcoal

- **HEPA dust filtration**

- **Sensors to detect dust particles, pollen, and odors**

- **Powerful and quiet**

- **Hand-held remote control**

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Before Using

How to Use

Maintenance

Trouble-Shooting

In order to ensure correct usage, please read this instruction manual carefully, and retain it for future reference.

# Safety precautions

The following displays categorize the degree of danger when mishandled.

<b>⚠ WARNING</b>	Possibility of serious injury and even death, if mishandled.
<b>⚠ CAUTION</b>	Possibility of injury and damage to household furniture and surroundings.

The following symbols are defined as follows:

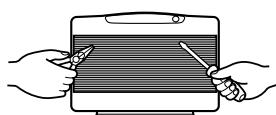
	Prohibited
	Do not touch
	Do not disassemble
	Do not get wet

Always follow

Remove the power plug

## ⚠ WARNING

**Do not repair, disassemble or modify.**



**Fire and/or electrical shock** may occur as a result.

For repair, contact your dealer of purchase or Mitsubishi Electric.

**Do not damage the power cord.**

- Do not coat or bundle.
- Do not place objects on top of the cord.
- Do not remove the power plug by pulling on the cord.



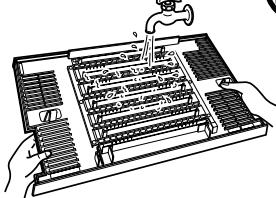
**Fire, electrical shock, and/or damage** may occur as a result.

**Do not use damaged power cord or plug. Do not use damaged power outlet where the plug cannot be inserted securely.**



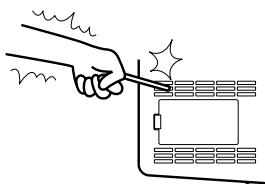
**Electrical shock, short circuit and/or fire** may occur as a result.

**Do not wash the Plasma unit.**



Using the Plasma unit when wet may cause **fire and/or electrical shock**.

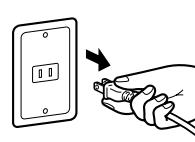
**Do not insert finger or foreign objects into the dust sensor.**



**Electrical shock** may occur as a result.

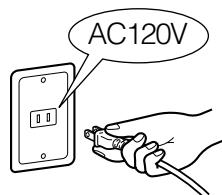
**Remove the power plug when cleaning.**

Furthermore, never handle the power plug with wet hands or get the plug wet.



**Electrical shock and/or injury** may occur as a result.

**Use an AC120V power outlet.**



**Electrical shock, short circuit and/or fire** may occur as a result.

To reduce the risk of electric shock, this equipment has a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact qualified personnel to install the proper outlet. Do not alter the plug in any way.

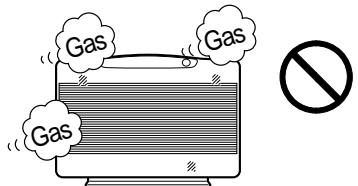
**Periodically remove dust from the power plug with a dry cloth.**



Dust build-up can cause bad insulation and a **fire** may occur as a result.

## ! CAUTION

**Do not allow the unit to intake flammable gases.  
Do not use where there is accumulation of such flammable gases (factories, hair salons, etc.).**



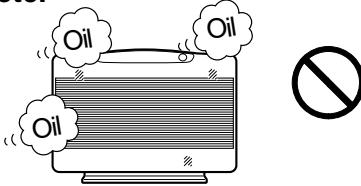
**Explosion and/or fire** may occur as a result.

**Do not install in a location such as a bathroom where the unit may get wet, and avoid places with high humidity.**



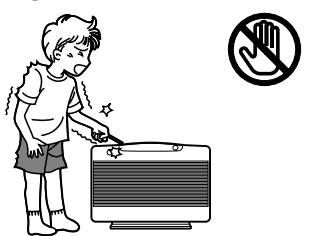
**Electrical shock and/or malfunction** may occur as a result. If the unit gets wet for some reason, stop operation, remove the power plug and contact your dealer of purchase or Mitsubishi Electric & Electronics USA, Inc..

**Do not use in a location where there is lampsmoke, such as from machine oil, etc.**



The unit may crack, resulting in **electrical shock and/or malfunction**.

**Do not insert fingers or foreign objects into the intake grill, the exhaust air port, or any small openings of the unit interior.**



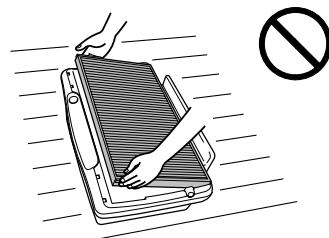
**Electrical shock, malfunction and/or injury** may occur as a result.

**Do not wipe with benzene or paint thinner, and do not spray insecticides or deodorizers, etc., onto the unit.**



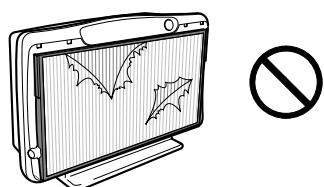
**Electrical shock, fire and/or cracking** may occur as a result.

**Do not remove the HEPA filter with the unit laying on its back.**



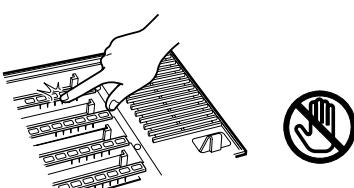
Dust may enter inside the unit, and **fire and/or electrical shock** may occur as a result.

**Do not use damaged filters, or operate the unit without a filter. Contact your dealer or Mitsubishi Electric for a replacement.**



**Fire and/or electrical shock** may occur as a result.

**Do not touch the electric poles of the Plasma unit.**



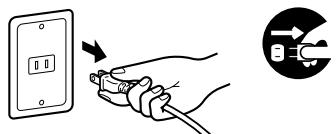
**Injury** may occur as a result.

**Ventilate periodically when using the unit with a heating appliance, etc.**



Insufficient ventilation may cause **CO intoxication**.

**Remove the power plug when not using for an extended period of time.**



Insulation may deteriorate, causing **short circuit, fire and/or electrical shock** as a result.

**Use the batteries correctly by following the items below.**



- Do not use rechargeable batteries.
- Make sure that the **+** and **-** are correctly aligned.
- When replacing, always replace batteries at the same time using the same type.
- If the electrolyte from the alkaline batteries comes into contact with skin, wash thoroughly with water. If the electrolyte accidentally enters your eye, flush with water and seek immediate medical attention.

**Injury and/or malfunction** may occur if mishandled.

# Precautions

This air purifier is for household use only. Do not use for business purposes.

<b>Do not block the intake grill or the exhaust air ports.</b>	<b>Do not use if the unit is laying on its back or front.</b>	<b>Do not use with the intake grill, the filters or the Plasma unit removed.</b>
<b>Malfunction</b> may occur as a result.	<b>Malfunction</b> may occur as a result.	<b>Malfunction</b> may occur as a result.

<b>Do not use the unit as a ventilation fan or range hood.</b>	<b>If the remote controller comes into contact with a liquid, remove batteries and dry thoroughly.</b>

This may drastically reduce the service life of the filter as well as cause **deformation, discoloration and/or malfunction**.

If the remote controller becomes inoperable, contact your dealer of purchase or Mitsubishi Electric.

Take note of the following when installing the unit

<b>Do not install near or on top of hot objects, such as a stove, etc.</b>	<b>Keep unit at least 3.3 feet (1m) away from televisions, cordless telephones, air conditioners, computers, incandescent bulbs, fluorescent lighting, etc.</b>	<b>When carrying</b>
Malfunction, deformation and/or discoloration may occur as a result.	Electrical wave interference may occur, resulting in the remote control becoming inoperable.	Turn the power switch to OFF, unplug the unit, and carry the unit by the handle.

<b>Do not use in a location exposed to direct sunlight</b>	<b>Leave space around the unit</b>
	<p>( 2 feet (60 cm) or more above the unit and 0.7 feet (20 cm) or more on the sides and back. )</p> <p>2 feet (60 cm) 0.7 feet (20 cm) or more 0.7 feet (20 cm) or more 0.7 feet (20 cm) or more 0.7 feet (20 cm) or more</p> <p>Walls and/or ceiling may become dirty as a result.</p>

Deformation and/or discoloration may occur as a result.

## How strong are the electromagnetic waves discharged by this air purifier?

The electromagnetic waves produced by this product are lower than mobile phones, and are harmless to the body and medical equipment.

## Can the unit remove odors of newly constructed houses?

The unit may not be able to completely remove odors if the discharge of odors is too much such as with new paint or carpet glues.

Notes

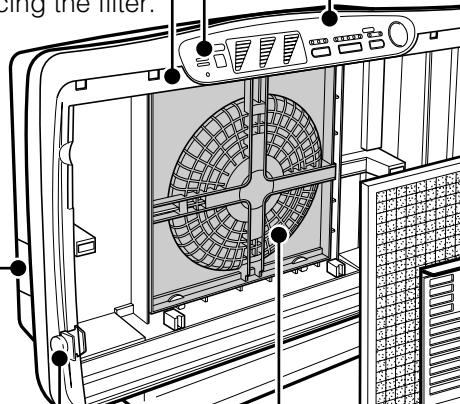
# Names and functions of parts

## Main unit

**Odor sensor**  
Detects smell of cigarettes, etc.

**Reset Switch**  
Press after replacing the filter.

Control panel



**Grill-release button**  
Press to remove the grill.  
(On each side of unit)

**Dust sensor**  
Detects polluted air such as pollen, etc. 6-7

## Accessories



Remote controller



Two AA type batteries for the remote controller

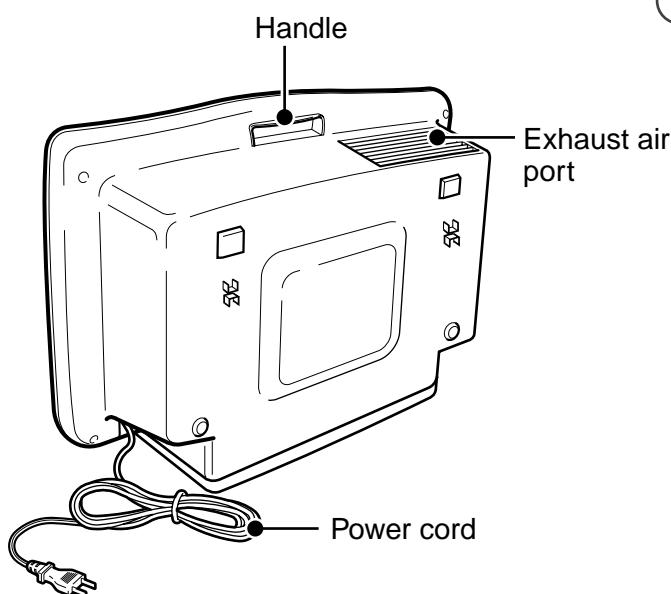
Precautions

Before Using

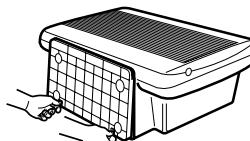
Names and functions of parts

### What is a HEPA filter?

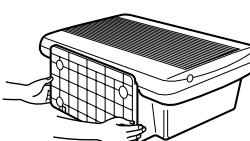
**<High Efficiency Particulate Air filter>**  
The HEPA filter is a high performance filter than can catch up to 99.97% of all particles as small as 0.3 micron in diameter.



### Removing and replacing the unit table stand



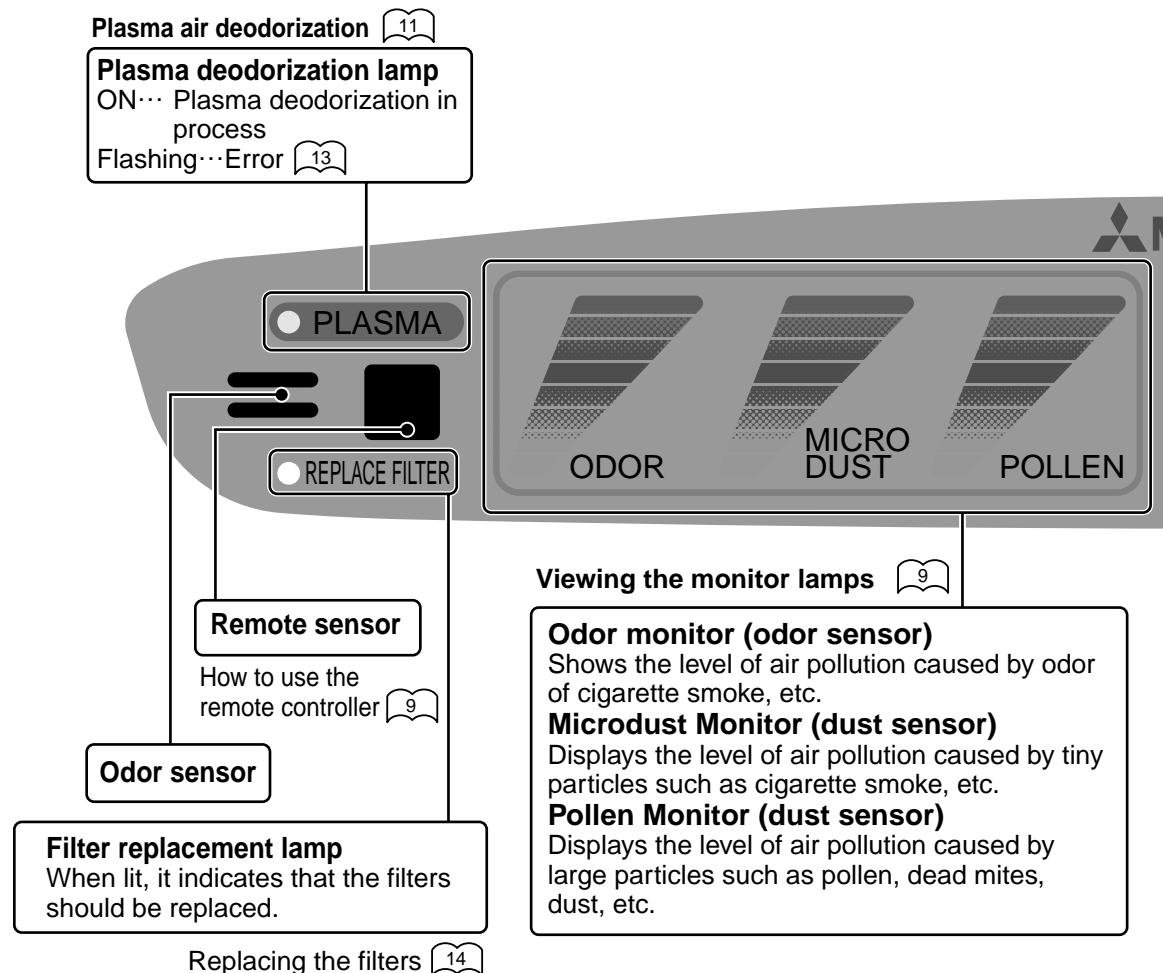
**<Removing>**  
Lay the unit on its back side, and then remove the stand by pressing table stand tabs.



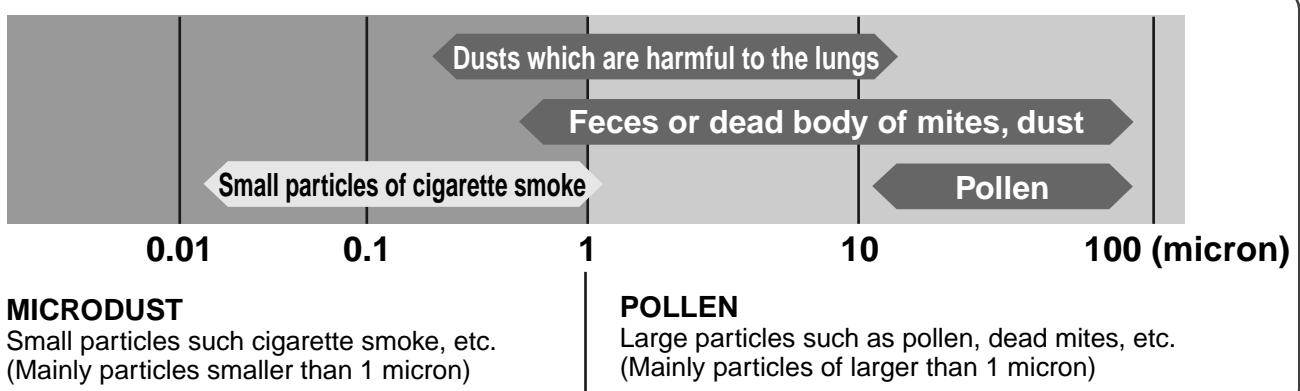
**<Replacing>**  
Hook the tabs on the front side of the table stand, and then press in the rear side of the stand.

# Names and functions of parts (continued)

## Control panel



## About microdust and pollen



## How do the sensors work?

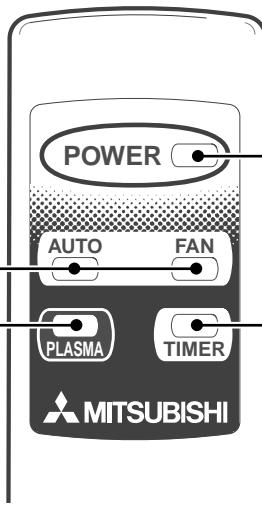
### Odor sensor

Using a semiconductor sensor, gases from odor ingredients are detected. The sensor will react to a breeze from air conditioners, fans, etc., as well as odorless gases and perfumes.

### Dust sensor

- **MICRODUST**: Using an optical sensor, the number of particles less than approximately 1 micron is detected.
- **POLLEN**: Using an optical sensor, the number of particles more than approximately 1 micron is detected.

## Remote control operation panel



**Operation mode button** 10  
• Switches operation modes.

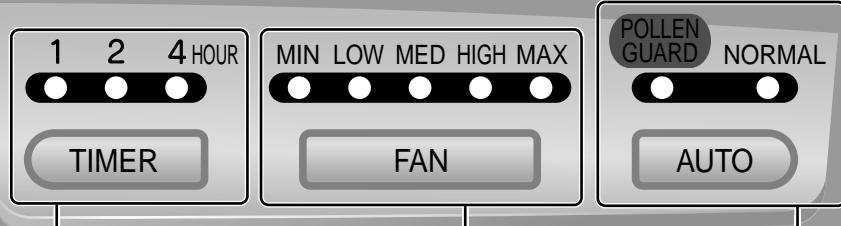
**Plasma air deodorization switch  
(on the remote only)** 11  
• Plasma air deodorization function ON  
• Plasma air deodorization function OFF

**Operation switch**  
• Turns the unit ON  
• Turns the unit OFF



**Off TIMER switch**  
• Switches the timer ON 11  
• Switches the timer OFF

MITSUBISHI



**Off TIMER operation** 11

**Off TIMER lamps**  
Show the remaining operation time (hours).

**Off TIMER button**  
• Switches the timer ON  
• Switches the timer OFF

**Changing the airflow** 10

**FAN level indicator**  
ON: The fan level in operation is displayed.  
Flashing: Error 15

**FAN button**  
• Switches operation modes and airflow volume

**POWER ON/OFF**

**Operation** 9  
**POWER button**  
• Turns the unit ON  
• Turns the unit OFF

**Operation mode lamps**  
POLLEN GUARD lamp ON: Pollen guard in progress  
NORMAL lamp ON: Normal operation in progress  
Flashing: Error 15

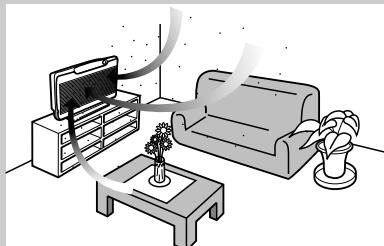
**AUTO button**  
Switches operation modes

## Effective usage

For the best results from your product, install the unit where there is good air circulation.

If you are concerned about pollen

### Table-top POLLEN GUARD operation 10



POLLEN GUARD, which reacts to even the slightest traces of pollen, is recommended. Since scattered dust and pollen fall gradually, install the unit in a low location for the best result.

Running the unit all day is also recommended if you are concerned about pollen.

If you are concerned about smoke

### Use by installing on a high platform



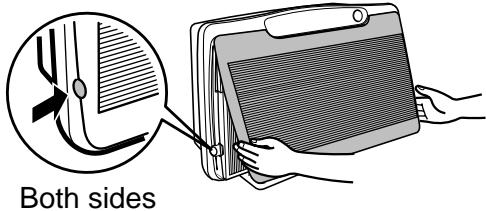
Since cigarette smoke rises directly upward, installing the unit in a high location is recommended such as on a counter or dresser.  
(Take caution so that the unit does not fall.)

# Preparation

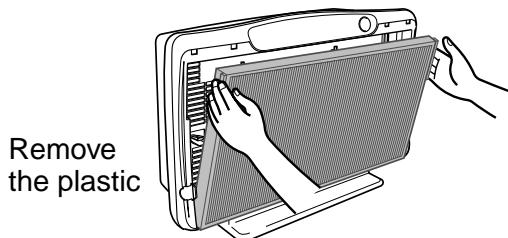
## Setting the filters

Remove the plastics from the HEPA filter and the activated charcoal filter before use.

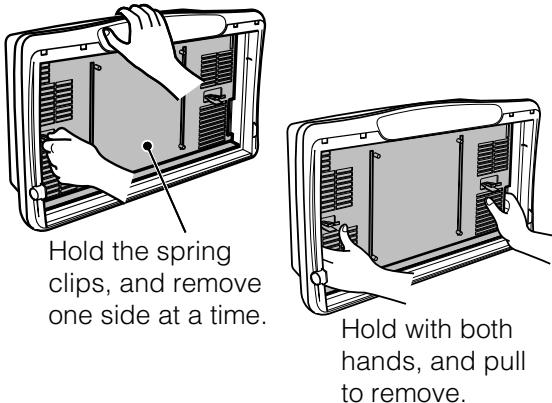
### 1 Press the grill-release buttons, and then remove the intake grill.



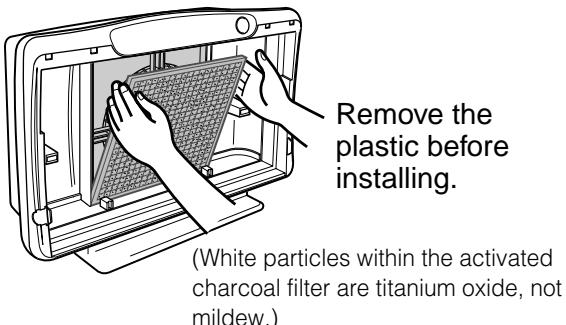
### 2 Remove the HEPA filter.



### 3 Remove the Plasma unit.



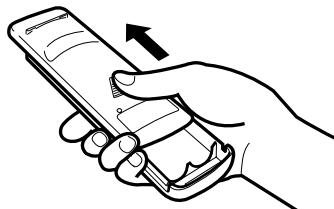
### 4 Install the activated charcoal filter.



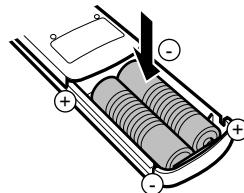
### 5 Replace the Plasma unit, the HEPA filter, and the intake grill.

## Installing the batteries for the remote controller

### 1 While pushing the cover, slide it forward.

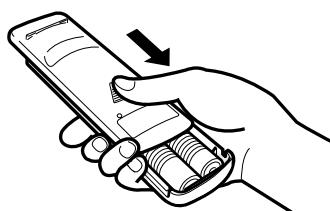


### 2 Insert the batteries.



- Ensure that the proper polarity is observed.

### 3 Close the cover by sliding it backward until it snaps shut.



### Caution

Use dry cell batteries in a proper manner.

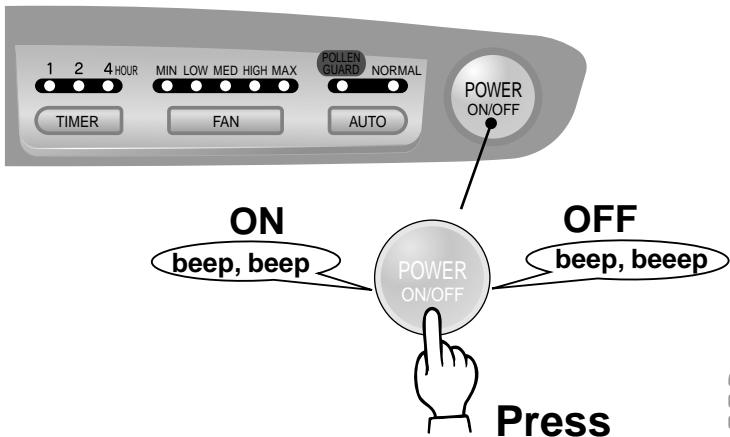
- Do not use rechargeable batteries.
- Make sure that the positive and negative poles are correctly aligned.
- When replacing, always replace with two new batteries of the same type.
- Should your skin come in contact with the electrolyte of the alkaline dry cell batteries, wash the affected area with water. Should the electrolyte enter your eye, immediately contact a doctor.

Wrong use may cause **injury** or **malfunction**.

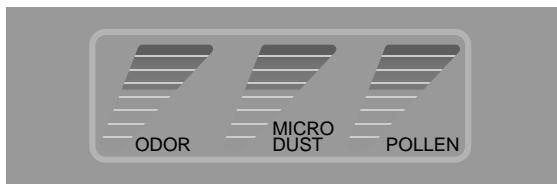
# Operation

## On the main unit

Press the power button on the main unit to turn on the air purifier.

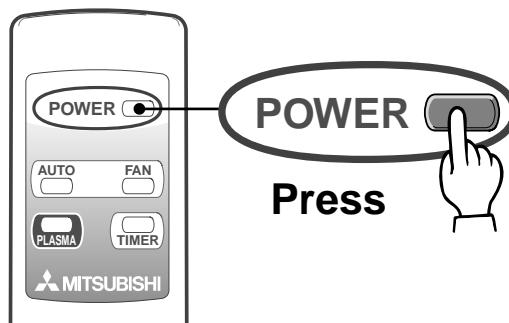


- Each time you press this button, the unit turns ON or OFF.
- Both the operation mode lamp and the monitor lamp must be ON.
- When you plug in the power cord, the monitor lamps blink for approximately two minutes while the sensors stabilize.



## Using the remote controller

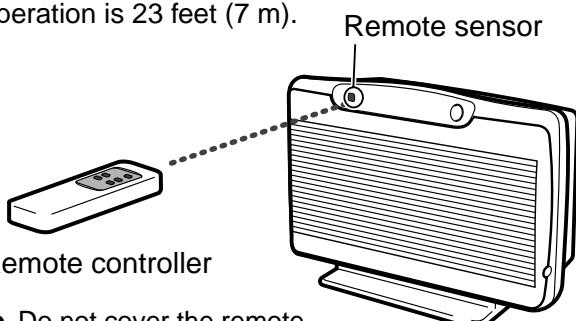
Press the power button on the remote controller to turn on the air purifier. The operation is the same as on the main unit.



### How to use the remote controller

The remote controller allows you to operate the unit from a remote place.

Aim the remote controller toward the main unit and press the switch. The maximum range of operation is 23 feet (7 m).



Remote controller

- Do not cover the remote sensor with cloths, etc.
- If the main unit does not respond properly to the signals from the remote controller, replace with the new batteries.
- Make sure the remote sensor and the remote controller are in sight of one another.

### Remote controller operation may not be possible in the following situations:

- In areas where the unit is subjected to direct sunlight. The infrared rays of the sunlight may effect the remote sensor on the unit
- In rooms with inverter lighting for lower power consumption. The noise from the inverter lighting may effect the remote sensor on the unit.

## Viewing the monitor lamps

The lamps light up (four levels) depending on amount of air contaminants or odors present.

FAN SPEED

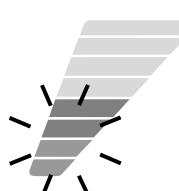
MAX



MIN



Clean air



Dirty air

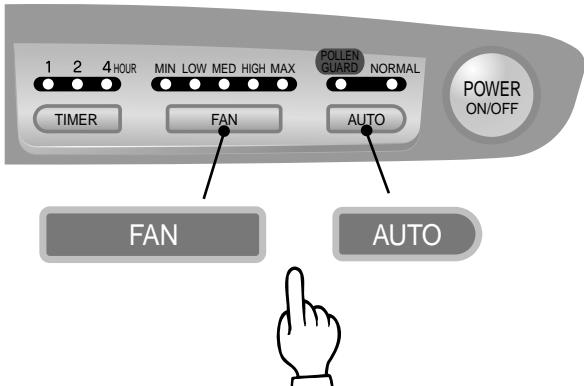


# Changing the airflow

You can select between FAN (manual) and AUTO operation modes.

## On the main unit

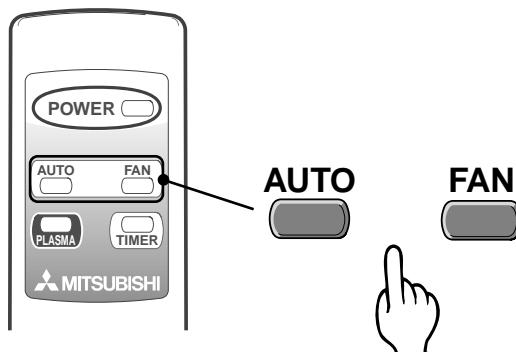
You can select from 5 airflow volumes or AUTO.



**Press**  
one of the buttons

## Using the remote controller

You can select the airflow volume from the remote controller. The operation is the same as with the main unit.



**Press**  
one of the buttons

### FAN

**You can select  
from 5 airflow  
volumes.**

- The airflow changes each time the button is pressed, and the lamp of the chosen volume lights up.



MIN LOW MED HIGH MAX



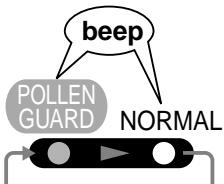
■ MIN or LOW  
When sleeping

■ HIGH or MAX  
When house cleaning

### AUTO

**You can select  
from POLLEN  
GUARD and  
NORMAL.**

- Operation switches every time the button is pressed, and the selected operation mode lamp lights.
- Operation is automatically adjusted to the appropriate airflow volume according to the odor monitor, microdust monitor, and pollen monitor.



■ POLLEN GUARD

- The sensor is set to *supersensitive* to react to even the slightest traces of pollen.
- The fan speed is faster than the NORMAL operation for easier intake of large particles such as pollen, etc.

■ NORMAL

- The level of air pollution in the room is monitored using the odor and dust sensors, and the appropriate airflow volume is automatically selected.
- When the air is clean, the fan will stop.

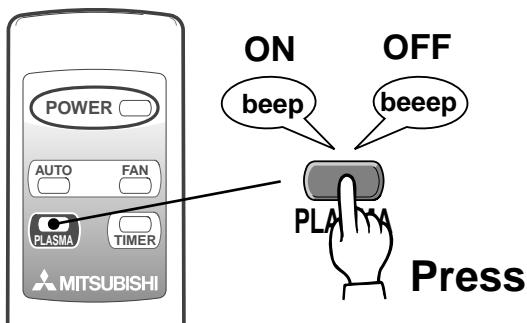
- The unit will return to the previously set mode even after turning the unit off.  
The unit will return to the previously set mode even when reinserting the power plug or after having a power failure.

# Plasma air deodorization

The unit uses the odor sensor to monitor the level of air pollution, then automatically activates the Plasma to break up odor ingredients in the air.

## Using the remote controller

You can turn the Plasma deodorization function ON or OFF.



- Each time you press this button, the Plasma unit turns ON or OFF.
- Turn the Plasma deodorization lamp ON.
- The unit will return to the previously set operation mode when power is interrupted.

- Since the unit operates intermittently during the Plasma deodorization, a hissing noise may be heard, and the unit may also stop at times. If the noise becomes irritating, turn off the feature by pressing the PLASMA button on the remote control.
- When the Plasma deodorization lamp is blinking, turn the unit off, and clean the Plasma unit. [13]

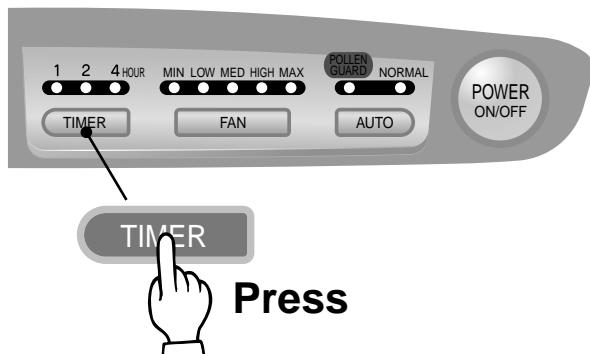
To operate from the main unit, you can turn the Plasma deodorization ON or OFF using the following procedure:

- When the power is turned on, press and hold the AUTO button, and press the POWER switch.

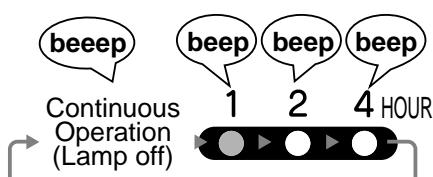
# Off TIMER operation

## On the main unit

You can set the unit so that it turns off after running for a preset time. (1, 2, 4 hours)



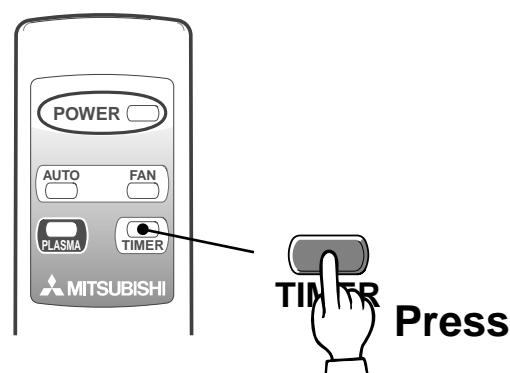
- The remaining operation time can be changed.



- The selected Off TIMER lamp lights.
- The Off TIMER lamp will display the remaining operation time and will switch as time passes.

## Using the remote controller

You can also use the remote controller to set/deactivate the off TIMER. The operation is the same as on the main unit.



# Maintenance

## WARNING

Before cleaning the unit, turn off the power and remove the power plug. Electrical shock and/or injury may occur as a result.

Monthly

Cleaning Sensors, the HEPA filter, and main unit

Yearly

Cleaning the Plasma unit

Replacing the filters

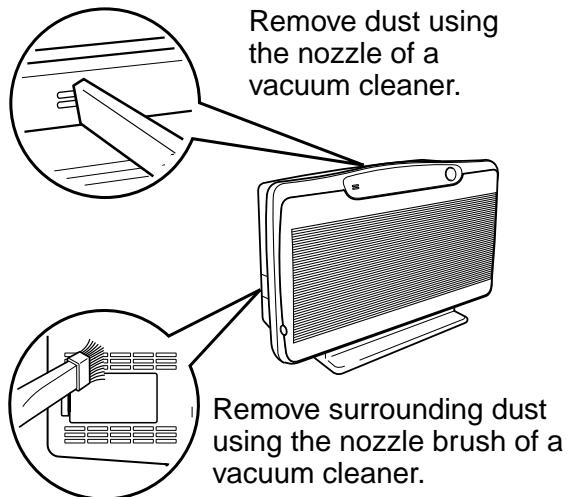
14

## Monthly cleaning

For the best performance from your unit, clean approximately once a month.

### Cleaning the sensors

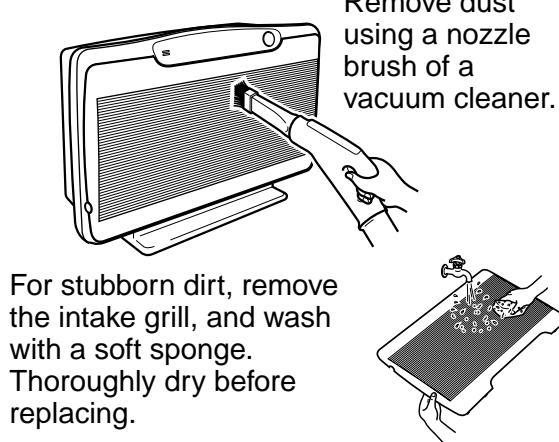
#### Odor sensor (control panel)



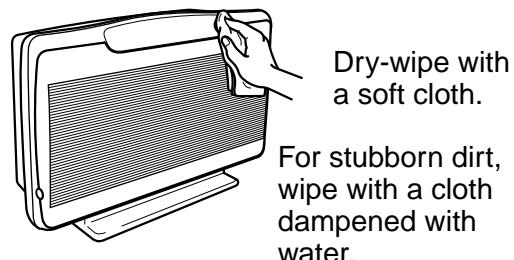
#### Dust sensor surroundings

### Cleaning the main unit

#### Intake grill

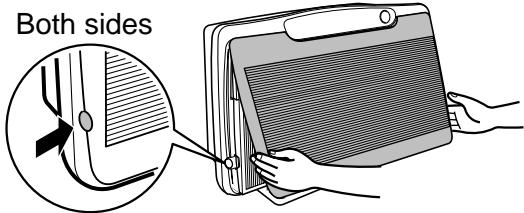


#### Main unit

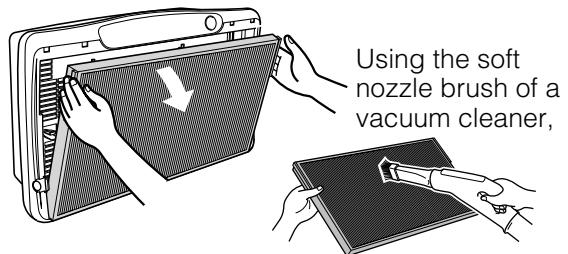


### Cleaning the HEPA filter

- 1 Press the grill release buttons on each side, and remove the intake grill.



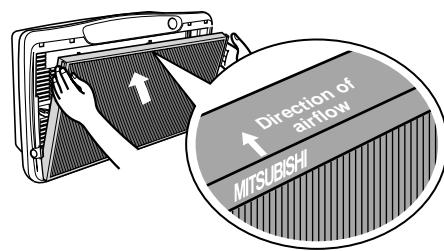
- 2 Remove the HEPA filter and clean.



remove dust by taking care not to tear the HEPA filter surface.

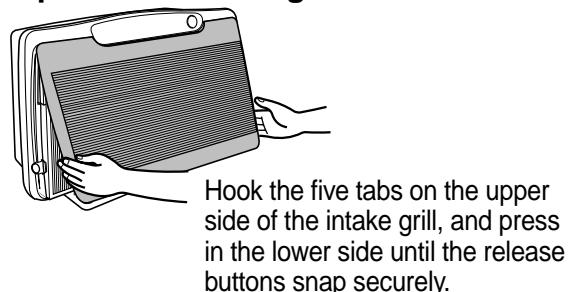
Do not wash. The filter cannot be reused if washed or after becoming wet.

- 3 Replace the HEPA filter.



Replace the HEPA filter with the **MITSUBISHI** logo facing you and arrows pointing away from you.

- 4 Replace the intake grill.



## **⚠️ WARNING**

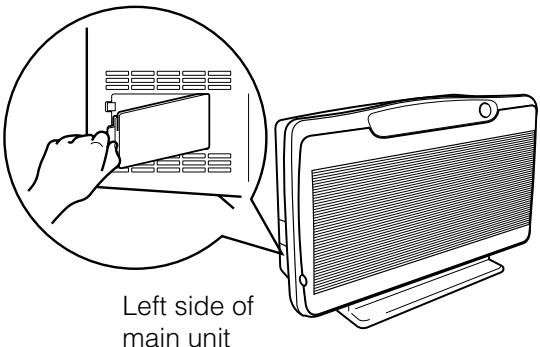
Before cleaning the unit, turn off the power and remove the power plug.  
Electrical shock and/or injury may occur as a result.

# Yearly cleaning

Clean at least once a year. Clean the Plasma unit if the Plasma deodorization lamp flashes.

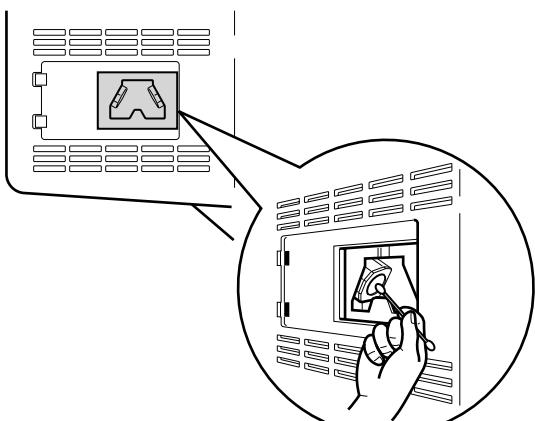
## Cleaning the dust sensor

### 1 Remove the cover by depressing the cover spring.



Left side of main unit

### 2 Clean the sensor lenses.



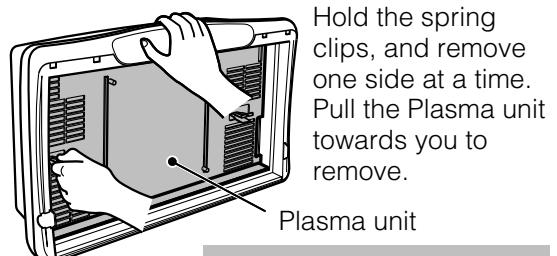
Use a dry cotton swab and clean the two lenses.

### 3 Replace the cover.

## Cleaning the Plasma unit

### 1 Press the grill release buttons on each side; remove the intake grill, and then remove the HEPA filter.

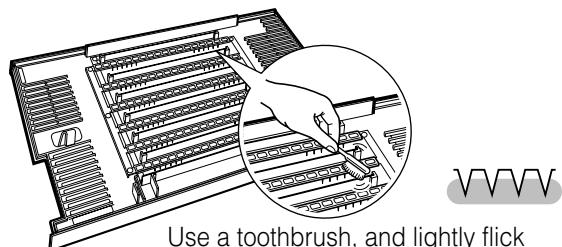
### 2 Remove the Plasma unit. 8



Plasma unit

Do not pull by force. Malfunction may occur as a result.

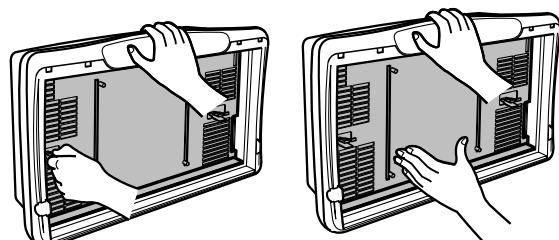
### 3 Clean the Plasma unit.



Use a toothbrush, and lightly flick off the tips of the electric poles.

Lightly flick off the tips. Using force may cause the Plasma unit to deform, resulting in malfunction of the unit.

### 4 Replace the Plasma unit.



Position the Plasma unit using both hands, and press in each spring clip until you hear a click.

Push in the lower section.

### 5 Replace the HEPA filter and the intake grill.

# Maintenance (continued)

## Replacing the filters

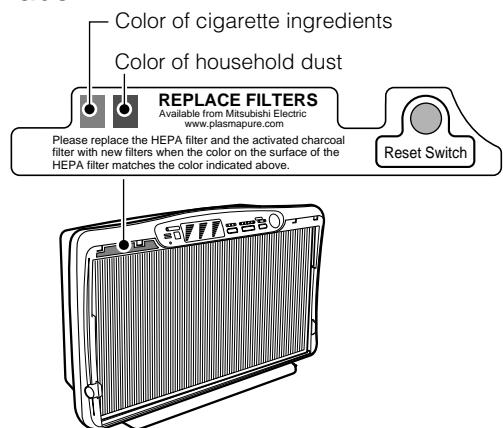
The filter replacement lamp notifies you of the replacement period of the HEPA filter and the activated charcoal filter. Replace both the HEPA filter and the activated charcoal filter at the same time.

### Replacement period

Although the replacement period depends on the usage environment and conditions, the lamp will light after approximately 5 years when using the unit on constant MIN fan speed.

(In the case of MAX, the lamp will light in approximately 1/4 the time.)

- When the filter replacement lamp illuminates
- When the HEPA filter becomes dirty and the color is about the same as that indicated on the label



- The service life of the filters varies depending on the usage environment, and conditions.
- The HEPA filter and the activated charcoal filter cannot be reused. Always replace old filters with new filters.
- When smoking large amount of cigarettes, odor may adhere to the filter and main unit. In this case, clean the main unit, and replace the filters.

Separately sold part:

Replacement filter set  
(HEPA filter/activated charcoal filter)

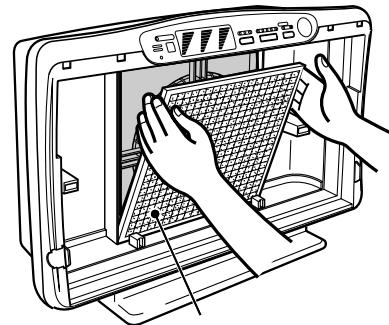
Model MAPR-E837HFT  
Code no. 5D4 C06

To order parts, contact your dealer or purchase or Mitsubishi Electric @ [www.plasmapure.com](http://www.plasmapure.com)

- 1 Remove the intake grill and the HEPA filter.

- 2 Remove the Plasma unit.

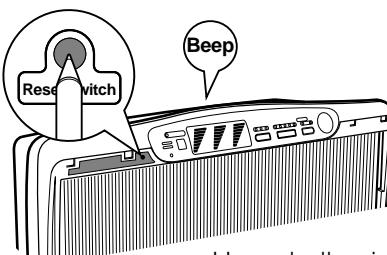
- 3 Replace the activated charcoal filter.



Set vertically.  
(There is no front or back.)

- 4 Replace the Plasma unit and mount a new HEPA filter. 

- 5 Insert the power plug and press the Reset Switch.



Use a ball point pen, or a similar pointed object, and press until a beep is heard.

- 6 Replace the intake grill.

# Troubleshooting

Symptom	Cause	Remedy
Main unit vibrates heavily	Is the unit installed on an unstable or unlevel surface?	Install on a level and stable surface.
There is no air intake	Is the power plug securely inserted into the power outlet?	Reinsert the power plug into the power outlet.
	Is the fan level lamp on? (Is the power on?)	Press the power switch and turn on the power.
Little monitor response	Are the sensors dusty?	Clean the sensors. 
Odor and smoke are not completely removed	Is the HEPA filter or the activated charcoal filter dirty?	Replace the HEPA filter and the activated charcoal filter. 
	Are the sensors dusty?	Clean the sensors. 
Fan noise and vibration are louder than before	Is the HEPA filter or the activated charcoal filter dirty?	Replace the HEPA filter and the activated charcoal filter. 
	Is the activated charcoal filter still wrapped in plastic?	Remove the plastic and replace.
One of the following lamps flash: FAN/POLLEN GUARD/NORMAL	Are the intake grill, the HEPA filter and the activated charcoal filter properly set?	Reset the intake grill, the HEPA filter and the activated charcoal filter. 
Plasma deodorization lamp flashes	There is an abnormal electrical discharge.	Clean the Plasma unit. 
The remote controller does not work	Have the batteries been completely depleted or are the + and - of the batteries set correctly?	Replace with new batteries, or correctly set the batteries observing the proper polarity. 

- The following symptoms are not malfunctions.

Symptom	Cause
The air fan does not turn, or there is no air discharge	Is the unit operating in AUTO (NORMAL) mode? The unit will stop operation when the air is clean.
A small hissing noise is heard, or there is a smell of ozone during the Plasma deodorization	During the Plasma deodorization, you may hear a small hissing noise or notice an ozone smell. (The level of noise and degree of the smell of ozone will vary depending on the environment. The generated ozone is of low concentration and is harmless to the body.)
The monitors do not change much (Odor monitor, microdust monitor and pollen monitor)	Is the room too large? Use the unit within the range of the applicable floor area.  If there is a large volume of dust or odor, it may take some time for the air to become clean.
The odor monitor does not change even when an odor can be noticed	The sensitivity of the sensor differs depending on odor ingredients, and the monitor display may at times remain unchanged.
The monitor lamp flashes	The monitor lamp will flash until the sensors become stable, even if the power is turned on immediately after inserting the power plug.
The monitor lamp flashes even when the room is clean	The sensor may at times respond to a breeze from air conditioners within the room, and gases that are unnoticeable to the human smell.

Should the problem persist after having checked the above list, stop using the unit, remove the power plug and contact your dealer of purchase or Mitsubishi Electric.

# Specifications

Model		MA-EF503HS-U	MA-EF303HS-U
Power supply		AC120V 60Hz	
Power consumption	MAX	66W	36W
	HIGH	28W	26W
	MED	19W	19W
	LOW	17W	17W
	MIN	16W	16W
Airflow volume	MAX	160 CFM	106 CFM
	HIGH	102 CFM	90 CFM
	MED	65 CFM	65 CFM
	LOW	46 CFM	46 CFM
	MIN	34 CFM	34 CFM
Room size		233 Sq.FT 13 ft × 18 ft	155 Sq.FT 11 ft × 14 ft
Weight		17.1lbs (7.6 kg)	
Dimension (H×W×D)		15-3/4" × 22-7/32" × 7-7/8" (400mm × 564mm × 200mm)	
Power cord length		8.2 ft (2.5m)	
Safety devices		Current fuse (2A), motor overheat protection device (operational temp: 212°F (100°C)), abnormal electric discharge protection device	
Accessories		Remote controller (type AA battery × 2)	

For more information, visit  
[www.plasmapure.com](http://www.plasmapure.com)  
 or call 1-866-475-2762